

REMARKS

The Office Action mailed July 14, 2005 has been carefully reviewed and, in view of the above amendments and following remarks, reconsideration and allowance of the application are respectfully requested.

I. Status Summary

Claims 54-101 are cancelled and claims 102-154 are added. in accordance with the above amendments to the claims. Claims 102-154 are currently pending in the application, with claims 102, 115, 123, 135, 145, and 150 being independent claims.

The Office Action rejected the cancelled claims as being either (a) anticipated by or (b) obvious over combinations of the following references: U.S. Patent Number 5,335,382 to Huang; U.S. Patent Number 5,704,137 to Dean, et al.; U.S. Patent Application Publication 2002/0053146 to Swigart; U.S. Patent Number 6,192, 606 to Pavone; French Patent Number 2 670 369 to Niculae; and French Patent Number 2 614 510 to Biotteau. The following material discusses claims 102-154 in light of these references.

II. Discussion of Claims 102-114

Independent claim 102 recites a fluid system for an article of footwear. The fluid system has a pair of polymer sheets and a bond that joins the polymer sheets. The polymer sheets define a pump chamber, a pressure chamber positioned adjacent the pump chamber, and a fluid path extending from the pump chamber to the pressure chamber to place the pump chamber and the pressure chamber in one-directional fluid communication. The bond forms edges of both the pump chamber and the pressure chamber. The bond is located between areas of the polymer sheets that define the pump chamber and the pressure chamber, and the bond separates fluid in the pump chamber from fluid in the pressure chamber. In addition, the pump chamber and the pressure chamber are located on opposite sides of a portion of the bond.

Huang discloses various embodiments of a fluid system with a pump chamber and a pressure chamber. In the embodiments of Figures 1, 8, and 10, for example, bonds separate a fluid that is located within the fluid system from fluid located outside the fluid system, but no bonds separate fluid in the pump chamber from fluid in the pressure chamber, as recited by independent claim 1. Furthermore, the pump chambers and conduits in Huang and the pressure

chambers and conduits in Huang may be located on opposite sides of bonds, but none of the embodiments show a pump chamber and a pressure chamber located on opposite sides of a bond, as recited by independent claim 1.

Dean discloses a fluid system where fluid flows freely between an interior chamber and an exterior chamber through various fluid channels. In contrast with independent claim 1, however, the fluid channels permit fluid flow in two directions. That is, Dean does not disclose one-directional fluid communication.

Swigart discloses an inner chamber and a pair of outer chambers on opposite sides of the inner chamber. Pavone discloses a pair of chambers separated by a relatively long conduit. Biotteau discloses a central chamber that is compressed to force air into at least three outer chambers. As with Huang, Swigart, Pavone, and Biotteau do not disclose a bond separating fluid in the pump chamber from fluid in the pressure chamber or that the pump chamber and the pressure chamber are located on opposite sides of a portion of the bond.

Niculae discloses a system that ventilates footwear. In contrast with independent claim 1, Niculae does not disclose a pressure chamber.

Based upon the above discussion, the Applicants respectfully submit that independent claim 102 is allowable over the various references noted above. In addition, claims 103-114 should be allowable for at least the same reasons.

III. Discussion of Claims 115-122

Independent claim 115 recites a fluid system for an article of footwear. The fluid system includes a pair of polymer sheets, a bond, and a valve. The polymer sheets define a pump chamber, a pressure chamber positioned adjacent the pump chamber, and a fluid path extending from the pump chamber to the pressure chamber to place the pump chamber and the pressure chamber in fluid communication. The bond joins the polymer sheets and forms edges of both the pump chamber and the pressure chamber. The bond is located between areas of the polymer sheets that define the pump chamber and the pressure chamber, and the bond separates fluid in the pump chamber from fluid in the pressure chamber. The valve is positioned between the polymer sheets and within the fluid path to permit fluid flow from the pump chamber to the pressure chamber and to substantially prevent fluid flow from the pressure chamber to the pump chamber. The pump chamber and the pressure chamber are located on opposite sides of the bond

and border the bond. The bond has a curved configuration that defines a concavity in the pressure chamber, and the pump chamber is at least partially positioned within an area formed by the concavity in the pressure chamber.

Independent claim 115 should be allowable over each of Huang, Dean, Swigart, Pavone, Biotteau, and Niculae for reasons that are substantially similar to the reasons discussed above for independent claim 102. Additionally, these references should be allowable as none of the references disclose a configuration wherein (a) a pump chamber and a pressure chamber are located on opposite sides of a bond, (b) the bond has a curved configuration that defines a concavity in the pressure chamber, and (c) the pump chamber is at least partially positioned within an area formed by the concavity in the pressure chamber.

Based upon the above discussion, the Applicants respectfully submit that independent claim 115 is allowable over the various references noted above. In addition, claims 116-122 should be allowable for at least the same reasons.

IV. Discussion of Claims 123-134

Independent claim 123 recites a fluid system for an article of footwear. The fluid system includes a first polymer sheet, a second polymer sheet, and a bond. The first polymer sheet has a pump chamber area, a pressure chamber area, a bond area, and a fluid path area. An edge of the pump chamber area is parallel to an edge of the pressure chamber area, and at least a portion of the bond area is located between the edge of the pump chamber area and the edge of the pressure chamber area. The bond joins the bond area of the first polymer sheet to the second polymer sheet and defines (a) a pump chamber between the first polymer sheet and the second polymer sheet and in a location corresponding with the pump chamber area, (b) a pressure chamber between the first polymer sheet and the second polymer sheet and in a location corresponding with the pressure chamber area, and (c) a one-directional fluid path between the first polymer sheet and the second polymer sheet and in a location corresponding with the fluid path area. The fluid path extends from the pump chamber to the pressure chamber to place the pump chamber and the pressure chamber in fluid communication. In addition, at least a portion of the bond is positioned between the edge of the pump chamber area and the edge of the pressure chamber area to separate fluid in the pump chamber from fluid in the pressure chamber.

Independent claim 123 should be allowable over each of Huang, Dean, Swigart, Pavone, Biotteau, and Niculae for reasons that are substantially similar to the reasons discussed above for independent claim 102.

Based upon the above discussion, the Applicants respectfully submit that independent claim 123 is allowable over the various references noted above. In addition, claims 124-134 should be allowable for at least the same reasons.

V. Discussion of Claims 135-144

Independent claim 135 recites a fluid system for an article of footwear. The fluid system includes a pair of polymer sheets and a bond. The polymer sheets define a pump chamber, a pressure chamber positioned adjacent the pump chamber, and a fluid path extending from the pump chamber to the pressure chamber to place the pump chamber and the pressure chamber in fluid communication. The bond has a first edge and an opposite a second edge separated by an area where the polymer sheets are joined together. The first edge forms a border of the pump chamber, and the second edge forms a border of the pressure chamber. The bond separates fluid in the pump chamber from fluid in the pressure chamber. In addition, the first edge and the second edge define an area located between the pump chamber and the pressure chamber, and the fluid path is absent from the area located between the pump chamber and the pressure chamber.

Referring to Figure 1 of Huang, chambers 1 and 2 are separated by a space, and conduit 3 is located in that space. A similar configuration is disclosed in other embodiments of Huang. In contrast, independent claim 135 recites that a fluid path is absent from an area located between a pump chamber and a pressure chamber. As with Huang, Dean, Swigart, Pavone, and Biotteau also disclose a conduit in a space between two chambers. In contrast with independent claim 135, Niculae does not disclose a pressure chamber.

Based upon the above discussion, the Applicants respectfully submit that independent claim 135 is allowable over the various references noted above. In addition, claims 136-144 should be allowable for at least the same reasons.

VI. Discussion of Claims 145-149

Independent claim 145 recites a fluid system for an article of footwear. The fluid system includes a pair of polymer sheets, a first valve, a second valve, and a single bond. The polymer sheets define a pump chamber, a pressure chamber, a first fluid path, and a second fluid path extending from an exterior of the fluid system to the pump chamber to place the pump chamber in fluid communication with the exterior of the fluid system. The bond joins the polymer sheets and extends along a boundary of the pump chamber, the pressure chamber, the first fluid path, and the second fluid path. A portion of the bond is located between the pump chamber and the pressure chamber to separate fluid in the pump chamber from fluid in the pressure chamber. In addition, opposite sides of the portion of the bond are located immediately adjacent the pump chamber and the pressure chamber.

None of the references disclose the configuration recited by independent claim 145. More particularly, Huang, Pavone, and Biotteau do not disclose opposite sides of a portion of a bond as being located immediately adjacent a pump chamber and a pressure chamber. That is, Huang, Pavone, and Biotteau discloses the same side of a bond as being adjacent the pump chamber and the pressure chamber. Dean does not disclose valves in the conduits. Dean and Swigart do not disclose the concept of a second fluid path in fluid communication with the exterior of the fluid system.

Based upon the above discussion, the Applicants respectfully submit that independent claim 145 is allowable over the various references noted above. In addition, claims 146-149 should be allowable for at least the same reasons.

VII. Discussion of Claims 150-154

Independent claim 150 recites a fluid system for an article of footwear. The fluid system includes a pair of polymer sheets that define a pump chamber, a pressure chamber separated from the pump chamber by a space that is located between the pump chamber and the pressure chamber, and a fluid path extending from the pump chamber to the pressure chamber to place the pump chamber and the pressure chamber in fluid communication. The fluid path is absent from the space. The fluid system also includes a bond that joins the polymer sheets and forms edges of both the pump chamber and the pressure chamber. The bond is positioned in the space, and the bond separates fluid in the pump chamber from fluid in the pressure chamber.

Referring to Figure 1 of Huang, chambers 1 and 2 are separated by a space, and conduit 3 is located in that space. A similar configuration is disclosed in other embodiments of Huang. In contrast, independent claim 150 recites that a fluid path is absent from an area located between a pump chamber and a pressure chamber. As with Huang, Dean, Swigart, Pavone, and Biotteau also disclose a conduit in a space between two chambers. In contrast with independent claim 150, Niculae does not disclose a pressure chamber.

Based upon the above discussion, the Applicants respectfully submit that independent claim 150 is allowable over the various references noted above. In addition, claims 151-154 should be allowable for at least the same reasons.

VIII. Conclusion

In view of the foregoing, the Applicants respectfully submit that all claims are in a condition for allowance. The Applicants respectfully request, therefore, that the rejections be withdrawn and that this application now be allowed.

This Amendment is being filed by facsimile transmission on November 14, 2005 with a Petition For Extension of Time and a Request For Continued Examination. Should additional fees be deemed necessary for consideration of this Amendment, such fees or extension are hereby requested and the Commissioner is authorized to charge deposit account number 19-0733 for the payment of the requisite fee. If anything further is desirable to place the application in even better form for allowance, the Examiner is respectfully requested to telephone the undersigned representative at (503) 425-6800.

Respectfully submitted,

By: 
Byron S. Kuzara
Registration No. 51,255

Banner & Witcoff, Ltd.
1001 G Street, N.W.
Washington, D.C. 20001-4597
Telephone: (202) 824-3000

Dated: November 14, 2005